

lessons, or renewed old memories, brought pleasures which only the true lovers of Nature can understand. And he died, as he had often expressed the wish to die, suddenly and painlessly.

To those who knew Charles Faxon best he has left the memory of a modest, kindly, unselfish gentleman whose life was inspiration and help to us all.

ARNOLD ARBORETUM.

SOME NEW SPECIES AND VARIETIES OF POA FROM EASTERN NORTH AMERICA.

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DURING the course of studies of the flora of northeastern North America the genus *Poa* has been found to be in great need of critical investigation, and the two following species are here proposed as partly clarifying the confusion which has so long existed in the series of plants passing as *P. debilis*, *P. sylvestris* and *P. alsodes*. The plants have heretofore been variously referred to these species, and sometimes one of them has been confused with *P. autumnalis*. The first is a common woodland species of the region from Newfoundland and southeastern Canada into the northeastern states and as a characteristic woodland plant may be called

POA saltuensis, n. sp., caespitosa; culmis tenuibus 2–8.5 dm. altis basi foliosis, nodis caulinis 2–4 remotis; foliis 2–5 mm. latis imis elongatis caulinis brevibus laminis quam vaginis brevioribus marginibus laevibus vel ad apicem scabriusculis, ligulis superioribus 0.3–1.5 mm. longis plerumque erosis; paniculis primariis 0.6–2 dm. longis nutantibus secundis, ramis filiformibus adscendentibus nutantibus plus minusve scabris ad apicem floriferis, mediis imisque plerumque binis rare solitariis vel ternis; spiculis 3–5-floris 3.5–5.5 mm. longis; glumis subaequalibus acutis quam lemma proximum quartam partem brevioribus glabris; lemmatibus 3.2–4 mm. longis acutis basi arachnoideis supra glabris viridibus vel rare purpurascens, margine anguste hyalinis, nervis marginalibus intermediisque prominentibus; antheris 1–1.2 mm. longis flavescens; caryopsibus ellipsoideo-fusiformibus fulvis 2–2.5 mm. longis.

Caespitose: culms slender, 2–8.5 dm. tall, leafy at base; the cauline nodes 2–4, remote: leaves 2–5 mm. wide; the lower elongate; the

cauline short, with the blade usually shorter than the sheath, smooth-margined or somewhat scabrous at tip; ligule of the upper leaves short, 0.3–1.5 mm. long, usually erose: primary panicles 0.6–2 dm. long, nodding and secund; the branches long and slender, ascending and widely nodding, more or less scabrous, spikelet-bearing near the tips, the middle and lower in 2's, very rarely in 1's or 3's: spikelets 3–5-flowered, 3.5–5.5 mm. long: glumes subequal, acute, about three-fourths as long as the nearest lemma, glabrous: lemmas 3.2–4 mm. long, acute, glabrous except the webbed base, green or rarely purple-tinged; margin narrowly hyaline; the marginal and intermediate nerves prominent: anthers 1–1.2 mm. long, yellowish: grain ellipsoid-fusiform, reddish-brown, 2–2.5 mm. long.—Woodland thickets and recent clearings, extending from eastern Quebec to western Ontario, southward to Nova Scotia, southern Maine, southern New Hampshire, central Massachusetts, Connecticut, New York, the mountains of Pennsylvania, and westward to northern Michigan. QUEBEC. Gaspé Co.: alluvial woods, Grand River, June 30–July 3, 1904, *Fernald*; wooded banks of River Ste. Anne des Monts, July 14, 1906, *Fernald & Collins*, no. 167 in part; wooded and alluvial banks, River Ste. Anne des Monts, July 14–16, 1906, *Fernald & Collins*, no. 357 (TYPE in Gray Herb.); calcareous alpine meadow at 1000–1100 m., Table-top Mt., August 7 & 12, 1906, *Fernald & Collins*, nos. 336, 338, 374; eastern syenitic slope of Table-top Mt., August 9 and 11, 1906, *Fernald & Collins*, no. 341. Rimouski Co.: damp woods, Bic, July 12, 1907, *Fernald & Collins*, no. 892. PRINCE EDWARD ISLAND. Prince Co.: dry clearing, Alberton, July 11, 1912, *Fernald & St. John*, no. 6904. Queens Co.: dry woods and clearings, St. Dunstan's, July 10, 1914, *Fernald & St. John* in Pl. Exsicc. Gray. no. 122. Kings Co.: open woods, Morell, June 29, 1914, *Fernald & St. John*, no. 10914. NOVA SCOTIA. Victoria Co.: Cold Brook, Sugar-loaf Mt., Aspy Bay, July 12, 1909, *J. R. Churchill*. Inverness Co.: moist woods, valley of the Barrasois River, July 25, 1914, *G. E. Nichols*, no. 326. MAINE. Aroostook Co.: common in woods, on gravelly shores, etc., St. Francis, July 17, 1898, *Fernald*, no. 2177; abundant in recent clearings, Masardis, June 8, 1898, *Fernald*, no. 2174; low woods, Masardis, June 8, 1898, *Fernald*, no. 2179; Presque Isle, July 14, 1902, *Williams, Collins & Fernald*; rocky woods, Mars Hill, July 14, 1893, *Fernald*. Penobscot Co.: mossy woods, Orono, May 30, 1889, May 30, 1890, *Fernald*, June, 1891, *F. P. Briggs*. Piscataquis Co.: Brownville, 1905, *J. C. Parlin*; abundant in rich woods, Foxcroft, June 6, 1898, *Fernald*. Oxford Co.: open woods, Canton, June 20, 1906, *Parlin*, no. 2062. Washington Co.: recent clearings, rare, Perry, July 9, 1909, *Fernald*, no. 1313. Cumberland Co.: rich woods, Scarborough, May 31, 1903, *Fellows & Fernald*. York Co.: North Berwick, June, 1892, *Parlin*. NEW HAMPSHIRE. Coös Co.: damp woods, Second Lake, Pittsburg, July 2, 1907, *Pease*, no. 10219; river-bank, Atkinson & Gilmanton Academy Grant, July 1, 1910, *Pease*, no. 12590; wooded

bank of Moose River, Gorham, July 28, 1915, *Pease*, no. 16362; alluvial woods by Moose River, Randolph, June 17, 1908, *Pease*, no. 11283; dry woods, Carroll, June 18, 1908, *Pease*, no. 11265; Oakes Gulf, Mt. Washington, July 8, 1895, *Faxon, Kennedy, Williams*; head of Oakes Gulf, July 21, 1909, *Pease*, no. 12087; Crawford Notch, June 7, 1878 and June 7, 1888, *Faxon*. Grafton Co.: Flume, Lincoln, June 28, 1855, *William Boott*; dry open woods, Woodstock, July 11, 1915, *Fernald*, no. 10557; Squam Lake, Holderness, June 8, 1886, *Faxon*; West Lebanon, May 29, 1894, *G. G. Kennedy*. Cheshire Co.: rocky woods, Barrett Mt., New Ipswich, June 5, 1896, *Fernald*. (This material formed the basis of the illustration of *P. alsodes* in Hitchcock's treatment of *Poa* in Gray's Manual, edition 7.) VERMONT. Lamoille Co.: summit of Mt. Mansfield, June 23, 1901, *T. O. Fuller*. Chittenden Co.: Burlington, May 30, 1895, May 31, 1897, *L. R. Jones*; Charlotte, June 2, 1877, *Pringle*. Orange Co.: swampy woods, Wells River, June 14, 1912, *C. H. Knowlton*. Windsor Co.: moist open field, Hartford, June 3, 1913, *C. H. Knowlton*. Rutland Co.: moist open woods, Brandon, May 26, 1917, *C. H. Knowlton*. Windham Co.: dry woods, Brattleboro, May 28, 1912, *L. A. Wheeler*. Bennington Co.: southeast slope, alt. 2500 ft., Mt. Equinox, Manchester, June 6, 1910, *J. A. Cushman*, no. 4387. MASSACHUSETTS. Middlesex Co.: near summit of Mt. Watatic, May 30, 1895, *T. O. Fuller*. Worcester Co.: Petersham, June 4, 1910, *G. G. Kennedy*. Franklin Co.: dry woodlands near Hoosac Tunnel, Rowe, June 24, 1913, *Fernald & Long*, no. 8786. Hampshire Co.: rich rocky woods, base of Mt. Holyoke, May 17, 1913, *Hubbard & Torrey*, no. 540. Berkshire Co.: Mt. Greylock, June 6, 1891, *W. P. Rich*; wet woods near Ice Glen, Stockbridge, July 3, 1906, *Ralph Hoffmann*. CONNECTICUT. Hartford Co.: stream-bank, Talcott Mts., May, 1879, *Charles Wright*. New Haven Co.: dry woods, Waterbury, May 28, 1912, *Blewitt*, no. 336, June 8, 1913, *Blewitt*, no. 1611. Litchfield Co.: dry woods, Salisbury, June 10, 1905, *Weatherby & Bissell*, no. 1482. NEW YORK. Tompkins Co.: rich woodlands near Round Marshes, Dryden, May 31, 1914, *F. P. Metcalf*, no. 1619. PENNSYLVANIA. Monroe Co.: rocky woods near Tannersville, May 30, 1902, *Canby*. Sullivan Co.: without locality, 1862, *C. E. Smith*; Union City, July 12, 1890, *Fernow*. ONTARIO. Thunder Bay District.: dry rocky ground, Current River, July 20, 1869, *J. Macoun*; dry woods, Nipigon, June 23, 1884, *J. Macoun*. MICHIGAN. Ontonagon Co.: Iron River, June 14, 1868, *H. Gillman*.

Var. **microlepis**, n. var., foliis angustioribus 1-3.5 mm. latis, ligulis superioribus brevissimis; paniculis primariis 3-11 cm. longis; spiculis 3-3.8 mm. longis plerumque 2-floris; lemmatibus 2.4-3 mm. longis.

Leaves narrower, 1-3.5 mm. wide; the upper ligules very short: primary panicles 3-11 cm. long: spikelets 3-3.8 mm. long, mostly 2-flowered: lemmas 2.4-3 mm. long.—Newfoundland to Maine and northern New Hampshire. NEWFOUNDLAND: wet clearings in spruce

woods along Gander River, Glenwood, July 12 & 13, 1911, *Fernald & Wiegand*, no. 4633 (TYPE in Gray Herb.); thicket by Birchy Pond Stream, East Branch of the Humber, July 11, 1910, *Fernald & Wiegand*, no. 2629; damp thicket near Goose Ponds, July 10, 1910, *Fernald & Wiegand*, no. 2630; dry bank of Steady Brook, marble region between Mt. Musgrave and Humber Mouth, July 15, 1910, *Fernald & Wiegand*, no. 2656; mossy brookside, Summerside, July 11, 1910, *Fernald & Wiegand*, no. 2627; brooksides and damp bushy ravines and subalpine thickets, limestone tablelands, alt. 200–300 m., Table Mountain, Port à Port Bay, July 16 & 17, 1914, *Fernald & St. John*, nos. 10786, 10787. QUEBEC. Gaspé Co.: dry woods, Grindstone, Magdalen Islands, July 22, 1912, *Fernald, Bartram, Long & St. John*, no. 6903; alluvial woods, River Ste. Anne des Monts, August 3–17, 1905, *Fernald & Collins*, July 14, 1906, *Fernald & Collins*, no. 167 in part. Bonaventure Co.: alluvial woods, Grand Cascapedia River, July 12–15, 1905, *Williams, Collins & Fernald*; arbor-vitae swamp, Carleton, July 24 & 27, 1904, *Collins, Fernald & Pease*. Quebec Co.: vicinity of Montmorenci Falls, July 28, 1905, *J. Macoun*, no. 69200. MAINE. Aroostook Co.: abundant in dry soil, Wallagrass, June 14, 1898, *Fernald*, no. 2175; ledgy shores and low thickets, Island Falls, June 9, 1898, *Fernald*, no. 2181. Penobscot Co.: low woods, Orono, June 23, 1893, *Fernald*. Piscataquis Co.: gravelly thickets and riverbanks, Sangerville, June 29, 1895, July 7, 1897, *Fernald*; wooded bank, Dover, June 28, 1894, *Fernald*; rocky woods, Brownville, June 22 & 28, 1905, *Parlin*, nos. 1865, 1869. Franklin Co.: Haley Pond, Rangeley, 1894, *Kate Furbish*. Androscoggin Co.: South Poland, 1893, *Kate Furbish*. NEW HAMPSHIRE. Coös Co.: alluvial woods of Dead Diamond River, Dartmouth College Grant, July 1, 1910, *Pease*, no. 12602; near Gorge of Diamond River, Dartmouth College Grant, July 1, 1910, *Pease*, no. 12625; dry wooded roadside, Pittsburg, July 10, 1917, *Pease*, no. 10082.

P. saltuensis is very similar in aspect to *P. debilis* Torrey, but the latter species has usually shorter, obtuse and much firmer chartaceous lemmas; broader glumes with mostly scabrous keels; longer cauline ligules (usually 2–2.5 mm. long); and smaller anthers (0.6–0.8 mm. long). *P. saltuensis*, var. *microlepis* has the spikelets as small as in *P. debilis*, but they maintain the acute lemmas and the anther-measurements of typical *P. saltuensis*, and the variety is decidedly more boreal. In distribution *P. saltuensis* is much more northern and eastern than *P. debilis*, the latter species extending from Vermont, Worcester Co., Massachusetts, and northern Connecticut through New York and Ohio to Michigan and Wisconsin. In central New York, where both species occur, *P. saltuensis* is found in the uplands associating with plants of boreal distribution, while *P. debilis* is a

species of lower levels near the lake-shores, where the flora is generally decidedly southern in aspect.

The second species here proposed is a small plant of boggy habitats which is abundantly distinct from the species to which it has heretofore been referred. This plant we propose as

POA paludigena, n. sp., subcaespitosa vel vix caespitosa; culmis tenuibus 1.5–7 dm. altis laevibus vel superne minute scabris basi purpurascentibus, nodis 3–5; foliis angustis 0.25–2(–3) mm. latis laminis superioribus quam vaginis brevioribus vel rare eis aequalibus; ligulis brevibus truncatis superioribus 0.7–1.5 mm. longis; paniculis 0.3–1.3 cm. longis nec secundis valde laxis disjunctisque, ramis elongatis tenuibus vix flexuosis patentibus rare reflexis glabris vel minute scabris imis mediisque plerumque binis rarissime ternis ad apicem floriferis; spiculis 3–6 mm. longis 2–5-floris; glumis quam lemma proximum dimidio vel saltem quartam partem brevioribus; lemmatibus 2.5–3.5 mm. longis basi vix arachnoideis acutis vel acutiusculis apice scariosis plerumque purpurascentibus, nervis mediis marginalibusque pilosis plerumque infra medium, nerviis intermediis glabris obscuris; antheris 0.5–0.8 (rare –1) mm. longis.

Culms slender, 1.5–7 dm. high, subsolitary or in small tufts, smooth or minutely scabrous at summit, purplish at the base, without elongated root-stocks; cauline nodes 3–5; leaves narrow, 0.25–2 (rarely –3) mm. wide; blade of the upper shorter than or rarely equalling the sheath; ligules short, truncate, those of the upper leaves 0.7–1.5 mm. long; panicle 0.3–1.3 dm. long, not secund, very loose and open; branches long and slender, scarcely flexuous, widely spreading, rarely reflexed, glabrous or minutely scabrous, the lower and median chiefly in 2's, very rarely in 3's, spikelet-bearing above the middle: spikelets 3–6 mm. long, 2–5-flowered: glumes one-half to three-fourths the length of the nearest lemma: lemmas 2.5–3.5 mm. long, scarcely webbed at base, acute or acutish; the tip scarious-margined and often purple-tinged; midrib and marginal nerves pilose chiefly below the middle; the intermediate nerves glabrous and obscure: anthers very small, 0.5–0.8 (rarely –1) mm. long.— In bogs or boggy places, central New York, Michigan, Illinois and Wisconsin. NEW YORK. Tompkins Co.: in sphagnum, Mud Creek, Dryden, June 30, 1907, *Wiegand*, no. 7574. Wayne Co.: in sphagnum, Westbury bog, Butler, June 24, 1917, *Metcalf & Wiegand*, no. 7572 (TYPE in Gray Herb.). MICHIGAN: "this *Poa* found in sphagnous swamps in Michigan, nearest *P. flexuosa* Muhl.?" June 16, 1895, *C. F. Wheeler*. ILLINOIS. Kane Co.: Elgin Swamp, *Vasey*. WISCONSIN. Brown Co.: mossy cold springs, June 25, 1881, *J. H. Schuetten*, no. 104; Upper Hill Creek in town of Ashwaubenon, June 25, 1881, *J. H. Schuetten*; Duck Creek, Big Saumico, June 21, 1895, *J. H. Schuetten*.

Related to *P. autumnalis* Muhl. and *P. reflexa* Vasey & Scribner. From the former it differs in the bog habitat, finer and less caespitose

habit, absence of hairs between the nerves of the lemma, the less prominent intermediate nerves of the lemma, and the much smaller anthers, those of *P. autumnalis* being 1.3–1.6 mm. long. From *P. reflexa*, *P. paludigena* is distinguished by the more slender, less caespitose habit, narrower leaves, shorter ligule and smaller spikelets. The anthers of the New York specimens were purple or violet when fresh; this may prove to be a constant specific character.

P. paludigena is apparently the plant described as *P. sylvestris* Gray, var. *palustris* Dudley, Cayuga Fl. 128 (1886). We have seen none of Dudley's material, but his description and the stations cited indicate *P. paludigena*, which, however, differs in many characters from *P. sylvestris*. The latter species has much broader leaves; stiffer longer panicles, with the more numerous branches strongly divergent and becoming reflexed; obtuse pubescent lemmas strongly webbed at base and with the midrib pilose to the tip and the median nerves prominent; and longer anthers (about 1.3 mm. long). The validity of the Linnean *Poa palustris* makes a new name necessary for *P. sylvestris*, var. *palustris* Dudley.

A NEW SPECIES OF BLADDERNUT.

J. FRANCIS MACBRIDE.

IN the fall of 1917, Mr. H. C. Brigham of the Walding, Kinnan & Marvin Co., wholesale druggists of Toledo, Ohio, sent to the Gray Herbarium pods and leaves from one of three bushes of *Staphylea* which were growing in his garden of native plants and which he had transplanted from the woods some years before. In his first communication, dated Oct. 1, Mr. Brigham wrote as follows: "They [the shrubs] were very small, but grew rapidly, and one of them is now about twenty feet high, while the others are more than twelve feet in height. As soon as they began to blossom and bear fruit, I noticed a strong dissimilarity between one of them and the other two. These distinctions I will set down here as briefly as may be:

"The ordinary form has a large, oblong, bright green pod, usually somewhat wrinkled. The odd form has a much smaller, pear-shaped